Complete Summary

GUIDELINE TITLE

Burns.

BIBLIOGRAPHIC SOURCE(S)

Burns. Philadelphia (PA): Intracorp; 2004. Various p.

GUIDELINE STATUS

This is the current release of the guideline.

All Intracorp guidelines are reviewed annually and updated as necessary, but no less frequently than every 2 years. This guideline is effective from July 1, 2004 to July 1, 2006.

COMPLETE SUMMARY CONTENT

SCOPE

DISEASE/CONDITION(S)

Burns, including

- Superficial (first-degree) burns
- Partial-thickness (second-degree) burns
- Full-thickness (third-degree) burns
- Full-thickness involving muscle, fascia, and bone (fourth-degree) burns

GUIDELINE CATEGORY

Counseling
Diagnosis
Evaluation

Management
Treatment

CLINICAL SPECIALTY

Dermatology
Emergency Medicine
Family Practice
Internal Medicine
Physical Medicine and Rehabilitation
Plastic Surgery
Surgery

INTENDED USERS

Allied Health Personnel
Health Care Providers
Health Plans
Hospitals
Managed Care Organizations
Utilization Management

GUIDELINE OBJECTIVE(S)

To present recommendations for the diagnosis, treatment and management of burns that will assist medical management leaders to make appropriate benefit coverage determinations

TARGET POPULATION

Individuals with burns

INTERVENTIONS AND PRACTICES CONSIDERED

Diagnosis/Evaluation

1. Physical examination and assessment of signs and symptoms
2. Diagnostic tests
    - Confirmation of burning agent type
    - Complete blood count and complete electrolyte panel
    - Creatine kinase level
    - Arterial blood gasses
    - Chest x-ray (CXR) (daily if intubated)
    - Electrocardiogram (elderly and suspected cardiac compromise patients)

Treatment/Management/Counseling

1. Topical 60% aloe vera lotion and pain management (superficial burns)
2. Transfer to Burn Center (burns beyond superficial)
3. Other treatment options

- Oxygen
- Endotracheal intubation
- Intravenous fluids
- Urinary catheter
- Pain management
- Tetanus prophylaxis
- Wound care
- Antibiotics
- Skin grafts, escharotomy, fasciotomy
- Enteral or parenteral feeding
- Escharotomy or fasciotomy
- Physical, occupational, and speech therapy
- Pressure garment and scar massage
- Counseling and support groups
- Corrective cosmetic techniques

4. Appropriate post-discharge care
5. Case management strategies

MAJOR OUTCOMES CONSIDERED

Not stated

METHODOLOGY

METHODS USED TO COLLECT/SELECT EVIDENCE

Hand-searches of Published Literature (Primary Sources)
Hand-searches of Published Literature (Secondary Sources)
Searches of Electronic Databases

DESCRIPTION OF METHODS USED TO COLLECT/SELECT THE EVIDENCE

Searches were performed of the following resources: reviews by independent medical technology assessment vendors (such as the Cochrane Library, HAYES); PubMed; MD Consult; the Centers for Disease Control and Prevention (CDC); the U.S. Food and Drug Administration (FDA); professional society position statements and recommended guidelines; peer reviewed medical and technology publications and journals; medical journals by specialty; National Library of Medicine; Agency for Healthcare Research and Quality; Centers for Medicare and Medicaid Services; and Federal and State Jurisdictional mandates.

NUMBER OF SOURCE DOCUMENTS

Not stated

METHODS USED TO ASSESS THE QUALITY AND STRENGTH OF THE EVIDENCE

Weighting According to a Rating Scheme (Scheme Not Given)

RATING SCHEME FOR THE STRENGTH OF THE EVIDENCE

Not stated

METHODS USED TO ANALYZE THE EVIDENCE

Review

DESCRIPTION OF THE METHODS USED TO ANALYZE THE EVIDENCE

Not stated

METHODS USED TO FORMULATE THE RECOMMENDATIONS

Expert Consensus (Delphi)

DESCRIPTION OF METHODS USED TO FORMULATE THE RECOMMENDATIONS

A draft Clinical Resource Tool (CRT or guideline) is prepared by a primary researcher and presented to the Medical Technology Assessment Committee or the Intracorp Guideline Quality Committee, dependent upon guideline product type.

The Medical Technology Assessment Committee is the governing body for the assessment of emerging and evolving technology. This Committee is comprised of a Medical Technology Assessment Medical Director, the Benefit and Coverage Medical Director, CIGNA Pharmacy, physicians from across the enterprise, the Clinical Resource Unit staff, Legal Department, Operations, and Quality. The Intracorp Guideline Quality Committee is similarly staffed by Senior and Associate Disability Medical Directors.

Revisions are suggested and considered. A vote is taken for acceptance or denial of the CRT.

RATING SCHEME FOR THE STRENGTH OF THE RECOMMENDATIONS

Not applicable

COST ANALYSIS

A formal cost analysis was not performed and published cost analyses were not reviewed.

METHOD OF GUIDELINE VALIDATION

Comparison with Guidelines from Other Groups
Internal Peer Review

DESCRIPTION OF METHOD OF GUIDELINE VALIDATION

Not stated

RECOMMENDATIONS

MAJOR RECOMMENDATIONS

Diagnostic Confirmation

Subjective Findings

- Moderate pain with superficial burns/first-degree
- Moderate to severe pain with partial-thickness/second-degree burns
- Full-thickness third- and "fourth-degree" burns are generally painless, due to nerve destruction

Objective Findings

- Superficial (first-degree)
    - Erythematous, without blisters
- Partial-thickness (second-degree)
    - Typically red and blistered (blistering may not occur for up to 12 hours post-injury)
    - Under the blister the wound is pink and moist.
    - Wound surface blanches with pressure, but may have waxy, dry areas similar to third-degree burns.
    - Patients may feel pain when the wound surface is exposed to air
- Full-thickness (third-degree)
    - Usually painless
    - White, firm, smooth, leathery (eschar); may appear translucent with visible thrombosed vessels
    - Insensitive to light or pin-prick touch
    - Some full-thickness scald burns may have a red appearance without a blanching response to pressure.
- Full-thickness (fourth-degree burns)
    - Possibly black (eschar) and depressed with exposure of bones and ligaments

Diagnostic Tests

- Confirmation of burning agent type
- Complete blood count (CBC) and complete electrolyte panel
    - Important in initial management to determine extent of blood loss, renal function, and need for electrolyte repletion
- Creatine kinase level
    - May be appropriate (especially in electrical burns) to assess extent of muscle injury and level of myoglobinuria (damages kidneys)
- Arterial blood gasses
    - Urgent in patients with respiratory compromise
- Chest x-ray (CXR): daily if intubated
    - Often normal initially but within 24 to 48 hours may indicate adult respiratory distress syndrome (ARDS)
- Electrocardiogram (ECG)
    - Should be performed on all elderly burn patients

- Necessary in all cases of suspected cardiac compromise (e.g., patients having shortness of breath or electrocution injuries

Treatment Options

- Superficial/first-degree burns
  - Topical applications such as 60% aloe vera lotion
  - Pain management (often necessary with large first-degree burns)
- For burns beyond superficial, apply American Burn Association Minimal Criteria for Transfer to Burn Center:
  - Partial-thickness and full-thickness
    - Greater than or equal to 10% total body surface area (TBSA) in patients younger than 10 years or older than 50 years
    - Greater than or equal to 20% TBSA in other age groups
  - Full-thickness
    - Greater than or equal to 5% TBSA in all age groups
  - Circumferential burns of the extremities or chest
  - Partial and full-thickness burns involving the face, eyes, ears, hands, feet, genitalia, perineum, or joints
  - Electrical burns, including lightning injuries
  - Chemical burns with threat of functional or cosmetic impairment
  - Inhalation injury in association with burns
  - Burned patients with associated trauma or preexisting illness
  - Children with burns seen in hospitals without qualified personnel or equipment
  - Patient who will require special social or emotional care or long term rehabilitation
- Other treatment options, depending on burn severity, include
  - Oxygen
  - Endotracheal intubation
    - If there are burns to the face and neck
    - If there is soot in and around the mouth and nose
    - If hoarseness, stridor, wheezing, or development of acute coughing
    - If there is carbonaceous sputum
  - Intravenous fluids (usually lactated Ringer´s solution, using the Parkland/Baxter formula to determine amount and rate of infusion)
  - Urinary catheter
  - Appropriate pain management with frequent pain assessment based on valid patient self-report measures
  - Tetanus prophylaxis
  - Wound care:
    - Debridement
    - Topical antimicrobials
    - Biologic dressings (e.g., Biobrane, SkinTemp)
    - Autologous skin grafting creates another wound
  - Antibiotics
  - Skin grafts (in facial burns, sheet grafts versus mesh grafts are always recommended)
  - Enteral or parenteral feeding
  - Escharotomy or fasciotomy for circumferential full thickness burns
  - Physical/occupational/speech therapy

    - Pressure garment (used to control hypertrophy of scar tissue, control itching, and attain skin texture that is smooth and flexible in deep second-degree and third-degree burns that have been grafted; generally worn 23 hours a day for 12 to 18 months)
    - Scar massage (promotes collagen remodeling, decreases itching, and provides moisture and pliability to burned region and donor sites)
    - Counseling/support groups for patient, family, and caregivers (e.g., Phoenix Society for Burn Survivors, Inc.; About-Face National Organization for Persons with Facial Disfigurement; National Burn Victims Foundation)
    - Corrective cosmetic techniques
- Appropriate post-discharge care at an accredited burn center
- (Note: State jurisdictional guidelines may supersede the recommendations of this guideline)

Duration of Medical Treatment

- Medical - optimal: 7 days; maximal: 730 days

Additional provider information regarding primary care visit schedules, referral options, frequency and duration of specialty care, physical therapy, and durable medical equipment is provided in the original guideline document.

The original guideline document also provides a list of red flags that may affect disability duration, and return to work goals, including

- Resolving first-degree burns
- Resolving second-degree burns
- Resolving third-degree burns
- After hospitalization

Case Management Directives (refer to the original guideline for detailed recommendations)

History

- Document patient's current versus baseline physical and psychological functioning

Communication

- Develop trusting relationship by employing skillful reflective listening techniques and therapeutic responses

Plan

- Develop a life care plan that documents consensus on treatment plan, including surgery, rehabilitation, equipment, follow-up care, and care settings

Teaching

- Explain recovery course, prognosis, and care plan in language matching the patient's or caregiver's level of comprehension

Support Groups

- Provide contact information for local and national support groups

Resolving

- Return to independence
- Discharge

CLINICAL ALGORITHM(S)

None provided

EVIDENCE SUPPORTING THE RECOMMENDATIONS

TYPE OF EVIDENCE SUPPORTING THE RECOMMENDATIONS

The type of supporting evidence is not specifically stated for each recommendation.

BENEFITS/HARMS OF IMPLEMENTING THE GUIDELINE RECOMMENDATIONS

POTENTIAL BENEFITS

Appropriate diagnosis, treatment, and management of burns that assist medical management leaders in making appropriate benefit coverage determinations

POTENTIAL HARMS

Not stated

IMPLEMENTATION OF THE GUIDELINE

DESCRIPTION OF IMPLEMENTATION STRATEGY

An implementation strategy was not provided.

INSTITUTE OF MEDICINE (IOM) NATIONAL HEALTHCARE QUALITY REPORT CATEGORIES

IOM CARE NEED

Getting Better

IOM DOMAIN

Effectiveness
Patient-centeredness

IDENTIFYING INFORMATION AND AVAILABILITY

BIBLIOGRAPHIC SOURCE(S)

Burns. Philadelphia (PA): Intracorp; 2004. Various p.

ADAPTATION

Not applicable: The guideline was not adapted from another source.

DATE RELEASED

1997 (revised 2004)

GUIDELINE DEVELOPER(S)

Intracorp - Public For Profit Organization

SOURCE(S) OF FUNDING

Intracorp

GUIDELINE COMMITTEE

CIGNA Clinical Resources Unit (CRU)
Intracorp Disability Clinical Advisory Team (DCAT)
Medical Technology Assessment Committee (MTAC)
Intracorp Guideline Quality Committee

COMPOSITION OF GROUP THAT AUTHORED THE GUIDELINE

Not stated

FINANCIAL DISCLOSURES/CONFLICTS OF INTEREST

Not stated

GUIDELINE STATUS

This is the current release of the guideline.

All Intracorp guidelines are reviewed annually and updated as necessary, but no less frequently than every 2 years. This guideline is effective from July 1, 2004 to July 1, 2006.

GUIDELINE AVAILABILITY

Electronic copies: Intracorp guidelines are available for a licensing fee via a password protected, secure Web site at www.intracorp.com.

Reprints of complete guideline content may be purchased for $35.00 per title (plus tax in TX at 8.25% and CT at 1.0%). Please send e-mail request to lbowman@mail.intracorp.com.

AVAILABILITY OF COMPANION DOCUMENTS

The following is available:

- Policies and procedures. Medical Technology Assessment Committee Review Process. Philadelphia (PA): Intracorp; 2004. 4 p.

Licensing information and pricing: Available from Intracorp, 1601 Chestnut Street, TL-09C, Philadelphia, PA 19192; e-mail: lbowman@mail.intracorp.com.

PATIENT RESOURCES

None available

NGC STATUS

This NGC summary was completed by ECRI on November 23, 2004. The information was verified by the guideline developer on December 8, 2004.

COPYRIGHT STATEMENT

DISCLAIMER

NGC DISCLAIMER

NGC, AHRQ, and its contractor ECRI make no warranties concerning the content or clinical efficacy or effectiveness of the clinical practice guidelines and related materials represented on this site. Moreover, the views and opinions of developers or authors of guidelines represented on this site do not necessarily state or reflect those of NGC, AHRQ, or its contractor ECRI, and inclusion or hosting of guidelines in NGC may not be used for advertising or commercial endorsement purposes.

Readers with questions regarding guideline content are directed to contact the guideline developer.

Date Modified: 10/9/2006